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SAN FRANCISCO DISTRICT

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Regulatory Branch

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1. INTRODUCTION: The Monterey County Resource Conservation District, 744 La Guardia Street, Salinas, California 93905, [contact: Danny Marquis (831) 424-1036] has applied for a Department of the Army regional permit authorizing the discharge of fill to restore eroded stream banks and construct sediment and water control structures to enhance natural aquatic systems in the Salinas River watershed in Monterey County, California. The work would be conducted as part of the Salinas River Watershed Regulatory Coordination and Permit Streamlining Program. This application is being processed pursuant to the provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344).

2. PROJECT DESCRIPTION:

The Salinas River Watershed Regulatory Coordination and Permit Streamlining Program proposes a set of agency agreements that facilitate conservation work on private lands, while ensuring the integrity of regulatory agency mandates. The project proponents – the U.S.D.A. Natural Resources Conservation Service (NRCS), the Resource Conservation District of Monterey County (MCRCD), Sustainable Conservation, and the Water Quality Protection Program of the Monterey Bay National Marine Sanctuary (WQPP) – and multiple public agencies have worked in concert to craft the program that will enhance natural habitat and reduce erosion on private lands in the watershed.

This program results in watershed-based permits and agreements covering only sixteen specific conservation practices (see table 1) issued to the NRCS and the MCRCD by regulatory agencies. This creates “one-stop regulatory permit shopping”

for NRCS clients involved in voluntary conservation work on their lands. NRCS clients include farmers, growers, ranchers, landowners, and tenant operators. The permits from federal, state and local agencies cover sixteen types of conservation practices in the Salinas River watershed. Under this program, an NRCS client who receives technical and/or cost share assistance from the NRCS for specific conservation practices will receive coverage through the watershed permits. The NRCS assists in project design and monitors implementation and maintenance of the conservation practices to ensure performance with the conditions of the permits. Provided the client follows the terms and conditions of the watershed agreements, he or she will not need to seek individual permits.

The NRCS and MCRCD will administer the program using *Procedures for Complying with Multiple Permits: A Guide for Conservation Planners*, a manual designed specifically for the permit coordination program. The guidebook creates a process for ensuring individual projects qualify for the program; lists conservation practice selection, design, and implementation criteria and conditions required by the agencies in their individual permits; provides information on endangered species habitat; and details the monitoring and reporting requirements of the program.

The Salinas River Watershed covers approximately 4,600 square miles of San Luis Obispo and Monterey counties (see figure 1). The permit-streamlining program covers all portions of the Salinas River watershed that lie within Monterey County. The watershed includes the Salinas River

and its primary tributaries, the Arroyo Seco, Nacimiento, and San Antonio rivers. Waterways that may be affected under this program include:

- Alisal Slough
- Arroyo Seco River (and its tributaries Reliz Creek, Willow Creek, Piney Creek, Sand Creek, Tassajara Creek, Paloma Creek, and Santa Lucia Creek)
- Chalone Creek
- Gabilan Creek (and its tributaries Mud Creek)
- Las Tablas Creek
- Nacimiento River
- Natividad Creek
- Salinas River (and its tributaries, including Big Sandy Creek, Chualar Creek, Hames Creek, Johnson Creek, Limekiln Creek, Monroe Creek, Pancho Rico Creek, Pine Creek, Quail Creek, San Lorenzo Creek, Toro Creek)
- San Antonio River
- San Marcos Creek
- Santa Rita Creek
- Temladero Slough (and its tributaries)
- Towne Creek
- Vaqueros Creek

The on-the-ground work covered by this permit would be designed by NRCS and implemented by the landowner to NRCS standards and specifications. The applicant states that while the practices are small in size, they can have significant environmental benefit through stabilizing soil, enhancing habitat, and providing landowners with alternatives to riparian livestock watering. The projects can contribute to improved ground water recharge, creation of riparian habitat, buffering of wetlands, and enhancement of wildlife habitat. NRCS anticipates that between 15 and 50 landowners will participate in the permit coordination program over a five-year period. The NRCS Resource Conservationist for the Salinas River Watershed Project would provide an annual report to the Corps describing each project and its purpose, participating landowners, reasons for and types of discharges, if any, confirmation that there

has been no net loss of jurisdictional waters or wetlands, and a description of the net gains in the quality, quantity and permanence of wetland acreage. The report would provide photo documentation of before and after site conditions. This report would be provided on January 31 of each year.

The purpose of the project is the biotechnical enhancement of natural aquatic systems through the use of the sixteen conservation practices listed below, to reduce non-point source pollution and stream erosion and provide the associated benefits of streambank protection, flood control, groundwater recharge, and habitat enhancement. The range of fill material may include; non-erodible earth, aggregate (i.e., gravel, clay, silt, sand) gabion wire baskets, logs, timber, rock, and mortar or concrete in limited discrete locations as energy dissipaters and grade stabilization structures. Stream channel stabilization projects would not exceed one cubic yard of discharge of fill per linear foot of channel. Typical grade stabilization structures involve 4 cubic yards per structure, but would not exceed 10 cubic yards per structure. Water and sediment basins may involve discharges of up to 300 cubic yards of compacted embankment per project but typically less than 20 percent of this quantity (40 cubic yards) would be placed within jurisdictional waters.

The applicant states the typical project would not result in the loss of acres of wetlands or jurisdictional waters. Occasionally a project may result in a loss of less than one third (1/3) of an acre of wetland, but implementation and maintenance of the conservation practices would enhance long-term functioning of the remaining or resulting wetlands or waters. No project would be initiated by NRCS that results in a net loss in the quality, quantity and permanence of wetland acreage and values in the Salinas River watershed

The intent of the permit coordination program and the associated conservation practices is to reduce erosion and sedimentation in the watershed and thereby improve water quality, the health of the natural resources and agricultural productivity.

However, any activity that involves work in an area with sensitive resources, no matter what the intent, has the potential to negatively affect those resources without careful planning. The following measures would be used when designing and implementing projects under the permit coordination program to avoid or minimize the potential impacts of the conservation practices on the natural and cultural resources, plants, animals and sensitive habitat in the watershed.

GENERAL PROTECTION MEASURES

TRAINING AND EDUCATION OF STAFF, CLIENT, AND CONTRACTOR

Prior to the onset of activities that may result in the disturbance of habitat or individuals of any listed species, all project workers including NRCS and MCRCD staff and growers, shall be given information and training on the existence and identification of listed species in the project area, a brief overview of the species' natural history, the protection afforded the species by the Act, and the specific protective measures to be followed during implementation of the practices under the Salinas River permit coordination program. Videos, brochures, books, and briefings may be used in the educational program, provided qualified NRCS staff are on hand to answer questions.

NRCS and MCRCD training in the Salinas field office shall clearly stipulate the special conditions of this consultation and the level of attention that NRCS project staff is required to expend on design and monitoring duties for projects that may affect listed species and/or cultural resources. Levels of training will be agreed upon with the relevant permitting agencies. An integral part of the training will be *Procedures for Complying with Multiple Permits: A Guide for Conservation Planners*. This Guide is designed specifically for NRCS and RCD staff to implement the permit coordination program for the Salinas River watershed and clearly identifies the project design process, conditions for implementing practices, and the monitoring and

reporting requirements of the regulatory permits and agreements issued as part of this program.

TEMPORAL LIMITATIONS ON CONSTRUCTION

Where habitat for Federal and State listed species is identified on or adjacent to the project work site, construction and activities that may disturb the breeding, feeding, mating and sheltering of these species shall be performed only between July 1st and October 15. Bird nesting sites shall be avoided during the nesting season – March 1 through July 31. Work beyond October 15 may be authorized following consultation with DFG, FWS, and/or NMFS and provided the work would be completed prior to first winter rains and stream flows.

LIMITATIONS ON PROJECT SIZE

The conservations projects are limited in size based on the following chart (see table 2). The estimations of average figures are based on typical projects installed in the watershed in the last 10 years. These maximums are based on definitions of small projects from regulatory agencies.

LIMITATIONS ON GRADING

In addition to the limitations on the amount of grading that can be performed, the following conditions apply to projects involving grading:

Work will only occur in a dry channel unless specific conditions are met as further described under *Limitations on Work in Streams and Permanently Poned Areas*, *Limitations on Construction Equipment*, and *Environmental Protection Measures and Conditions for Specific Conservation Practices* as follows in this document.

Disturbance to existing grades and vegetation will be limited to the actual site of the conservation

project and necessary access route. Placement of all roads, staging areas, and other facilities shall avoid and limit disturbance to habitat as much as possible. No more than .25 acres of native shrubs, woody perennials or trees may be removed from the streambank or stream channel. There shall be no removal of native trees six inches or greater dbh.

Implementation of practices shall minimize all potential contributions of sediment to waterways, and will produce only in short-term disturbance creating insignificant amounts of fine sediment during construction. Excavated material not used in the implementation of the practice will be removed and moved to upland portions of the property.

Upon completion of grading, slope protection of all disturbed sites will be provided prior to November 1 through a combination of permanent vegetative treatment, mulching, geotextiles, and/or rock. Only native plant species or non-invasive, non-persistent grass species will be used.

Finished grades will not exceed 2:1 side slopes.

LIMITATIONS ON CONSTRUCTION EQUIPMENT

The NRCS and MCRCD shall ensure that contamination of habitat does not occur during routine operations. The use or storage of petroleum-powered equipment shall be accomplished in a manner to prevent the potential release of petroleum materials into waters of the state (Fish and Game Code 5650). Fueling and maintenance of vehicles and other equipment shall occur at least 50 feet from any aquatic habitat including a pond, stream, creek, or water body, and riparian habitat. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

Heavy equipment shall not be used in flowing or standing water, except to cross a stream or pond to access the work site. When possible,

NRCS/MCRCD shall use existing ingress or egress points and/or perform work from the top of the creek banks. Use of heavy equipment shall be avoided in a channel bottom with rocky or cobbled substrate. If access to the work site requires heavy equipment to travel on a rocky or cobbled substrate, only a rubber tire loader/backhoe may be used and the amount of time this equipment is stationed, working, or traveling within the creek bed shall be minimized. When heavy equipment is used, woody debris and vegetation on banks and in the channel outside the scope of the project shall not be disturbed.

REVEGETATION AND REMOVAL OF EXOTIC PLANTS

The project area shall be restored to pre-construction condition or better. All exposed soil resulting from the project's construction activities shall be revegetated using live planting, seed casting or hydro seeding. Any stream bank area left barren of vegetation as a result of the implementation or maintenance of the practices shall be restored to a natural state by seeding, replanting, or other agreed upon means with native trees, shrubs, and/or grasses prior to November 1st of the project year. Soil exposed as a result of construction, soil above rock riprap, and interstitial spaces between rocks shall be revegetated by live planting, seed casting, or hydro seeding prior to November 30th of the project year.

The spread or introduction of exotic plant species shall be avoided to the maximum extent possible by avoiding areas with established native vegetation during project activities, restoring disturbed areas with native species where appropriate, and post-project monitoring and control of exotic species. Removal of invasive exotic species shall be strongly recommended. Mechanical removal (hand tools, weed whacking, hand pulling) of exotics shall be done in preparation for establishment of perennial plantings. To the extent possible, revegetation should be implemented at the same time removal of exotic vegetation occurs.

The use of native plants characteristic of the local habitat type shall be the preferred alternative when implementing and maintaining the practices in natural areas. Non-invasive, non-persistent grass species (i.e. barley grass) may be used as nurse crops or for their temporary erosion control benefits to stabilize disturbed slopes until natives are established.

Annual inspections for the purpose of assessing the survival and growth of revegetated areas and the presence of exposed soil shall be conducted for two years following the end of project. The NRCS/MCRCD shall note the presence of native/non-native vegetation and extent of exposed soil, photographing the vegetation during each inspection. The NRCS shall provide the location of each project, before and after photos, areas revegetated and planting methods and plants used, and the success of the revegetation program in the Salinas River Permit Coordination Program Annual Report provided to the regulatory agencies each January.

CONDITIONS FOR EROSION CONTROL

Nearly all of the conservation practices included under the permit coordination program are designed to control erosion and sedimentation. However, the construction and installation of the practices can potentially result in short term, minor erosion or sedimentation. The following measures will be used to prevent or minimize sediment deposition as a result of implementation and maintenance of projects.

Erosion control and sediment detention devices shall be incorporated into the project design and implemented at the time of construction. These devices shall be in place during construction activities, and after if necessary, for the purposes of minimizing fine sediment and sediment/water slurry input to flowing water, and of detaining sediment laden water on-site. These devices will be placed at

all locations where the likelihood of sediment input exists. Sediment collected in these devices shall be disposed of away from the collection site and above the normal high-water mark. These devices will be inspected at least once a day to ensure they are functioning properly.

The workspace will be isolated from flowing water to prevent sedimentation and turbidity. Prior to construction activities, sandbag cofferdams, straw bales, silt fences, culverts or visquen (diversions) shall be installed to divert stream flow away from or around workspace. These diversions shall remain in place during the project and will be removed immediately after work is complete.

If a project requires dewatering any area, either a pump shall remove water to an upland disposal site, or a filtering system shall be used to collect the water and return clear water to the creek. The pump intake shall be fitted with a fish exclusion device.

The project site shall be restored to pre-construction condition or better. Streambank, ground and/or soil (except for soil in agricultural fields) exposed as a result of construction, soil above rock riprap, and interstitial spaces between rocks shall be revegetated by live planting, seed casting, or hydro seeding prior to November 30 of the project year.

All debris, sediment, rubbish, vegetation or other material removed from the channel banks, channel bottom, or sediment basins shall be removed to a location where they shall not re-enter the waters of the state.

LIMITATIONS ON WORK IN STREAMS AND PERMANENTLY PONDED AREAS

If it is necessary to conduct work in a live stream, the workspace shall be isolated to avoid construction activities in flowing water. If it is deemed necessary to work in a flowing stream/creek, the workspace will be isolated from flowing water to prevent sedimentation and

turbidity. Prior to construction activities, sandbag cofferdams, straw bales, silt fences, culverts or visquen (diversions) shall be installed to divert stream flow away from or around workspace at an appropriate rate to maintain downstream flows during construction. Excavating a channel for the purpose of isolating the workspace from flowing water is prohibited. Adequate water depth and channel width must be maintained at all times to allow for fish passage. When construction is completed, the barriers to flow shall be removed in a manner that will allow flow to resume with the least disturbance to the substrate.

When implementing or maintaining a critical area planting above the high water line a filter fabric fence, fiber rolls and/or hay bales shall be utilized, if needed, to keep sediment from flowing into the adjacent water body. At the time vegetation is sufficiently mature to provide erosion control it may be appropriate to remove the fence, fiber rolls and/or hay bales. Annual review by NRCS/RCD shall occur until the critical area planting is established to control erosion.

Use of heavy equipment shall be avoided in a channel bottom with rocky or cobbled substrate. If access to the work site requires crossing a rocky or cobbled substrate, only a rubber tire loader/backhoe may be used and the amount of time this equipment is stationed, working, or traveling within the creek bed shall be minimized. If the substrate of a seasonal pond, creek, stream or water body is altered during work activities, it shall be returned to approximate pre-construction conditions after the work is completed, unless the NRCS and NMFS or DFG determine that other measures should be implemented.

The implementation and maintenance of projects shall not result in sediment covering a clean bottom. A "clean" bottom is characterized by cobbles, gravel and small stones (1 to 6 inches in size).

All debris, sediment, rubbish, vegetation or other material removed from the channel banks, channel

bottom, or sediment basins shall be removed to a location where they shall not re-enter the waters of the state. All petroleum products chemicals, silt, fine soils, and any substance or material deleterious to fish, plant, or bird life shall not be allowed to pass into, or be placed where it can pass into the waters of the State.

Construction or maintenance activities of Sediment Basin, Underground Outlet, Diversion and Grassed Waterway shall not result in increases in turbidity in the stream (as measured by NTU) of more than 10 percent of upstream background.

LIMITATIONS ON USE OF HERBICIDES

Except as noted below, no pesticides or fertilizers shall be used in the stream area to hasten or improve the growth of critical area plantings. In most circumstances, organic amendments shall be used to ensure successful establishment of restoration vegetation associated with the practices. In situations where organic amendments will not guarantee adequate establishment of restoration vegetation, application rates for chemical fertilizers will be based on soil nutrient testing and shall utilize slow release or split applications to minimize leaching or runoff into water bodies. Fertilizers may be used on stream banks above the normal high water mark the year of planting if necessary.

Hand labor shall be used to control exotic vegetation at the site. Herbicides may be applied to control established stands of non-native species including Kikuya Grass (*Pennisetum clandestinum*), Bermuda Grass (*Cynodon dactylon*), and Andean Pampas Grass (*Corederia jubata*). Where it is necessary to use herbicides to control established stands of exotics or to control the invasion of exotics into restoration plantings, the herbicides must be applied according to registered label conditions. Herbicides must be applied directly to plants and may not be spread upon any water.

ENVIRONMENTAL PROTECTION MEASURES AND CONDITIONS FOR SPECIFIC CONSERVATION PRACTICES

CRITICAL AREA PLANTING

When implementing or maintaining a critical area planting above the high water line, a filter fabric fence, fiber rolls and/or hay bales shall be utilized, if needed, to keep sediment from flowing into the adjacent water body. At the time vegetation is sufficiently mature to provide erosion control it may be appropriate to remove the fence, fiber rolls and/or hay bales. Annual review by NRCS/MCRCD shall occur until the critical area planting is established to control erosion.

Except as noted below, no pesticides or fertilizers shall be used in the stream area to hasten or improve the growth of critical area plantings. Herbicides may be applied to control established stands of non-native species including Cape Ivy (*Senecio mikanioides*), Castor Bean (*Ricinus communis*), and Giant Reed (*Arundo donax*). Herbicides must be applied to those species according to the registered label conditions. Herbicides must be applied directly to plants and may not be spread upon any water. Fertilizers may be used above the normal high water mark the year of planting.

DIVERSION, GRASSED WATERWAY, FILTER STRIP, ACCESS ROADS, AND UNDERGROUND OUTLET.

Construction or maintenance activities of Underground Outlet, Diversion and Grassed Waterway shall not result in increases in turbidity in the stream (as measured by NTU) of more than 10 percent of upstream background.

Where construction of a sediment basin includes a pipe or structure that empties into a stream, an energy dissipater shall be installed to reduce bank scour.

Grassed waterways are designed to convey the runoff associated with the contributory area along a prescribed slope to avoid erosion caused by the concentrated flow. The waterway may not divert water out of the natural sub watershed.

GRADE STABILIZATION STRUCTURE, STREAMBANK PROTECTION AND STREAM CHANNEL STABILIZATION

Construction and maintenance of Grade Stabilization Structures in streams or creeks that support a Salmonid fishery are not covered under this program. Projects seeking to implement conservation practices in those circumstances must seek individual permits from appropriate public agencies.

If it is deemed necessary to work in a flowing stream/creek, the site shall be isolated or dewatered and the water above the barrier shall be diverted downstream at an appropriate rate to maintain downstream flows during construction. Adequate water depth and channel width must be maintained at all times to allow for fish passage. When construction is completed, the barriers to flow shall be removed in a manner that will allow flow to resume with the least disturbance to the substrate.

Sediment removal from the stream channel or ponds may occur if it will improve biological functioning of the stream and restore channel capacity. Sediment removal may not occur in a flowing stream or standing water.

No creosote treated timbers shall be used for grade or channel stabilization structures, bulkheads or other instream structures.

PIPELINE

Pipeline shall be installed and maintained only when streambed is dry, with a maximum vertical bank height of three feet. Trenching associated with this practice must be a minimum of three feet deep below streambed.

SEDIMENT BASIN, IRRIGATION
REGULATION RESERVOIR, AND WATER
AND SEDIMENT CONTROL BASIN

Bird nesting sites shall be avoided during the breeding season, March 1 through July 31. Where water and sediment control basins create marshy conditions and attract nesting birds and other wildlife, maintenance may occur only from August 1 to October 15.

Sediment basins shall not be constructed in a stream channel or other permanent water bodies. The work may involve grading along one shore of the stream to remove gullies or eroded banks prior to building a streamside basin. Where construction of a sediment basin includes a pipe or structure that empties into a stream, an energy dissipater shall be installed to reduce bank scour.

Construction or maintenance activities of sediment basins shall not result in increases in turbidity in the stream (as measured by NTU) of more than 10 percent of upstream background.

3. STATE APPROVALS: Under Section 401 of the Clean Water Act (33 U.S.C. Section 1341), an applicant for a Corps permit must obtain a State water quality certification or waiver before a Corps permit may be issued. The applicant has provided the Corps with evidence that he has submitted a valid request for State water quality certification to the Central Coast Regional Water Quality Board. No Corps permit will be granted until the applicant obtains the required certification or waiver. A waiver shall be explicit, or it will be deemed to have occurred if the State fails or refuses to act on a valid request for certification within 60 days after the receipt of a valid request, unless the District Engineer determines a shorter or longer period is reasonable for the State to act.

4. ENVIRONMENTAL ASSESSMENT: The Corps of Engineers will assess the environmental impacts of the action proposed in accordance with the requirements of the National Environmental Policy Act of 1969 (Public Law 91-190), and

pursuant to Council on Environmental Quality's Regulations, 40 CFR 1500-1508, and Corps of Engineers' Regulations, 33 CFR 230 and 325, Appendix B. Unless otherwise stated, the Environmental Assessment will describe only the impacts (direct, indirect, and cumulative) resulting from activities within the jurisdiction of the Corps of Engineers. The documents used in the preparation of the Environmental Assessment will be kept on file in the Regulatory Branch, Corps of Engineers, 333 Market Street, San Francisco, California.

Threatened and Endangered Species - The NRCS is consulting with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service on the effects of the project on threatened and endangered species.

Cultural and Archaeological Resources - NRCS would be the lead agency for cultural resources for all projects implemented under the Salinas River Watershed Permit Coordination Program. The NRCS has a Programmatic Agreement (PA) with the State Historic Preservation Office and the Advisory Council on Historic Preservation that states that the NRCS is responsible for cultural resources compliance in all actions where NRCS is considered the lead agency.

The PA creates a process for assessing potential impacts, reviewing local, state and national records and literature, and consulting with tribal authorities, historical societies and other interested parties. The policy also dictates the NRCS process for dealing with the discovery of human remains and previously unknown cultural resources.

5. EVALUATION OF ALTERNATIVES:

Evaluation of this activity's impact on the public interest will also include application of the guidelines promulgated by the Administrator of the Environmental Protection Agency under Section 404(b)(1) of the Clean Water Act, 33 U.S.C. Section 1344(b).

6. PUBLIC INTEREST EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluation of the probable impacts that the proposed activity may have on the public interest requires a careful weighing of all those factors that become relevant in each particular case. The benefits that reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so the conditions under which it will be allowed to occur, are therefore determined by the outcome of the general balancing process. That decision will reflect the national concern for both protection and utilization of important resources. All factors that may be relevant to the proposal must be considered including the cumulative effects thereof. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

7. CONSIDERATION OF COMMENTS: The Corps of Engineers is soliciting comments from the public, Federal, State and local agencies and officials, Indian Tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to

determine the overall public interest of the proposed activity.

8. SUBMISSION OF COMMENTS: Interested parties may submit in writing any comments concerning this activity. Comments should include the applicant's name, the number, and the date of this notice and should be forwarded so as to reach this office within the comment period specified on page one of this notice. Comments should be sent to the Regulatory Branch. It is Corps policy to forward any such comments that include objections to the applicant for resolution or rebuttal. Any person may also request, in writing, within the comment period of this notice that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Additional details may be obtained by contacting the applicant whose address is indicated in the first paragraph of this notice, or by contacting Bob Smith of our office at telephone 415-977-8450 or E-mail: rsmith@spd.usace.army.mil. Details on any changes of a minor nature that are made in the final permit action will be provided on request.

Table 1. Conservation Practices:

1. ACCESS ROADS	This practice is used to improve an <u>existing</u> fixed route for travel for moving livestock, produce, equipment, and to provide access for property management while controlling runoff to prevent erosion and maintain or improve water quality. An example of the practice might include regrading and outsloping a road so that water is less erosive as it travels across the road
2. CRITICAL AREA PLANTING	This practice is used to stabilize the soil, reduce damage from sediment and runoff to downstream areas, and improve wildlife habitat and visual resources. Planting materials include trees, shrubs, vines, grasses, or legumes, on highly erodible or critically eroding areas (this does not include tree planting mainly for wood products). Plants may take up more of the nutrients in the soil, reducing the amount that can be washed into surface waters or leached into ground water.
3. DIVERSION	An earth channel is constructed across the slope with a supporting ridge on the lower side to slow and redirect surface flow. This practice results in the reduction of sheet and rill erosion by reducing the length of slope. Sediment may also be reduced by the elimination of gullies, reducing the amount of sediment and related pollutants delivered to the surface waters.
4. FENCE	A constructed barrier to limit or regulate the passage of livestock or wildlife. Fences are not needed where natural barriers will serve the purpose. This practice is usually applied in conjunction with other practices to improve resource conditions.
5. FILTER STRIP	A strip or area of vegetation for removing sediment, organic matter, and other pollutants from runoff and wastewater. Filter strips may also reduce erosion on the area on which they are implemented. This practice is used on cropland at the lower edges of fields adjacent to streams, ponds, and lakes to remove sediment and other pollutants from runoff. Installation often requires soil manipulation to remove surface irregularities and prepare for planting. When the field borders are located such that runoff flows across them in sheet flow, coarser grained sediments are filtered and deposited. Pesticides and nutrients may be removed from runoff through infiltration, absorption, adsorption, decomposition, and volatilization thereby protecting water quality downstream. However, they may not filter out some soluble or suspended fine-grained materials, especially during heavy rain events.
6. GRADE	

STABILIZATION STRUCTURE	A structure is built into a creek bed or channel bottom to control the grade and prevent head cutting in natural or artificial channels. Where possible, designs rely on biotechnical solutions, however some projects require limited amounts of rock or concrete to control the rate of flow or water level in channels. Stream velocities will be reduced above and below the structure resulting in reduced stream bank and streambed erosion. This will decrease the yield of sediment and sediment-attached substances. Structures that trap sediment will also improve downstream water quality.
7. GRASSED WATERWAY	This practice is installed to reduce erosion in a concentrated flow area, such as a gully. A natural or constructed channel is shaped or graded to stabilize substrate and improve conveyance of runoff. Grassed waterways may be used to move runoff from agricultural lands into riparian or wetland areas. This may result in the reduction of sediment and substances delivered to receiving waters. Vegetation may act as a filter in removing some of the sediment delivered to the waterway, although this is not the primary function of a grassed waterway.
8. IRRIGATION REGULATING RESERVOIR	A small storage reservoir constructed to regulate or store a supply of water for irrigation. This practice improves management of irrigation water and livestock watering by providing short-period storage of either diverted surface water, water from a pumped or flowing well, or water from an irrigation delivery system.
9. PIPELINE	This practice is designed to reduce bank erosion, sediment yield and manure in waterways. By supplying water to off-stream watering locations, such as troughs, livestock are diverted away from stream and lakes. A pipeline may cross a stream or watercourse.
10. SEDIMENT BASINS	Sediment basins will trap sediment, sediment associated materials, and other debris and prevent undesirable deposition on bottom lands and in waterways and streams. Basins are generally located at the base of agricultural lands adjacent to natural drainage or riparian areas. The practice does not treat the source of sediment but provides a barrier to reduce degradation of surface water downstream. Due to the detention of runoff in the basin, there is an increased opportunity for soluble materials to be leached toward the ground water. Basins may also increase groundwater recharge. The design of spillways and outlet works will include water control structures to prevent scouring at discharge point into natural drainage.
11. SPRING DEVELOPMENT	

	<p>This practice is used to improve the distribution of water or increase the quantity of water for livestock and wildlife. Improving springs and seeps by fencing out livestock, excavating, cleaning, capping or providing collection and storage facilities. Water bearing soil and rocks are developed and piping is installed to a trough or tank away from the spring. A wooden or concrete box backfilled with gravel may also be constructed to hold the water to be piped. The area around the spring may be fenced to control livestock and therefore improve the wildlife habitat value of the spring or seep. Developing sources of water away from riparian areas and water bodies may reduce the impacts of livestock on those areas as well. Development is confined to springs or seepage areas that can furnish a dependable supply of water. Water flow from the spring or seep may be temporarily reduced during the construction period. Spring development uses an excavation process that does not result in the placement of fill in or around spring areas.</p>
12. STREAM BANK PROTECTION	<p>Stream bank protection consists of using vegetation or structures to stabilize and protect banks of streams, lakes, estuaries, or excavated channels against scouring and erosion. Bank protection reduces sediment loads, which can cause downstream damage and pollution. This practice can improve the stream for fish and wildlife habitat as well as protect adjacent land from erosion damage. This practice can be applied to natural or excavated channels where the streambanks are susceptible to erosion from the action of water or debris or to damage from livestock or vehicular traffic. The streambed grade must be controlled before most permanent types of bank protection can be considered feasible.</p>
13. STREAM CHANNEL STABILIZATION	<p>This practice involves stabilizing the channel of a stream with suitable structures. And applies to stream channels undergoing damaging aggradation or degradation that cannot be controlled with upstream practices. The design and installation of stream channel stabilization structures shall result in a stable streambed favorable to wildlife and riparian growth.</p>
14. TANK OR TROUGH	<p>This practice provides watering facilities for livestock at selected locations, allowing for proper distribution of grazing and better grassland management for erosion control. Another purpose can be to reduce or eliminate the usage of streams by livestock.</p>
15. UNDER-GROUND OUTLETS	<p>A conduit installed beneath the surface of the ground to collect surface water and convey it to a suitable outlet. Excess surface water generated by farm land on steep terrain can be collected and conveyed to a sediment basin by installing pipe safely buried underground. Location, size, and number of inlets are determined to collect excess runoff and prevent erosive surface flow. This runoff is then discharged at</p>

	sediment basin where high velocity runoff is calmed and suspended sediment is trapped prior to releasing water into natural drainage channel.
16. WATER AND SEDIMENT CONTROL BASIN	An earthen embankment or a combination ridge and channel generally constructed across the slope and minor watercourses to form a sediment trap and water detention basin. This practice traps and removes sediment and sediment-attached substances from runoff. Salts, soluble nutrients, and soluble pesticides will be collected with the runoff and will not be released to surface waters. Although some ground water recharge may occur, little if any pollution hazard is usually expected. Often located alongside riparian or wetland environments to buffer impact of upslope runoff and sediment prior to release to natural drainage. Basins can be used to reduce concentrated off-site flow and associated erosion by metering out runoff following large storm events.

Table 2: Grading Dimensions and Volume
Associated with Implementation of the Practices

Conservation Practice	Maximum length (Feet)	Maximum Dimensions (Acres)	Maximum Volume (Cubic Yards)
Access Roads	Max:1 mile Average: 0.5	Max:2.5 Average: 1.25	Max:1,500 Average: 750
Critical Area Planting	Max:2,000 Average: 500	Max: 1 Average: .25	Max: 500 Average: 500
Diversions (upland application only)	Max:2,000 Average: 1,000	Max: 2 Average: 1	Max:1,500 Average: 1,500
Fence (when installed in Corps jurisdictional areas)	Not applicable	Not applicable	Not applicable
Filter Strip	Max: 2,500 (along waterways) Average: 500	Max: 1 (along waterways) Average: 0.5	Max:1500 Average: 500
Grade Stabilization Structure	Max: 4-10 structures per 200 feet Av. :2 structures per project	N/A	Max: 30 cubic yards per structure Average: 100 cubic yards total
Grassed Waterway	Max: 2,000 Average: 1,000	Max: 2 Average: 1	Max:1,500 Average: 750
Irrigation Regulating Reservoir	N/A	Max: 1 Average: 1	Max:1,500 Average: 1,500
Pipeline (when passing through Corps jurisdictional areas)	Max: 50 Average: 25	Max: 0.25 Average:0.12	Max: 50 Average: 25
Sediment Basin	N/A	Max: 1 Average: 1	Max:1,500 Average: 1,500
Spring Development	N/A	Max: 0.05 Average: 0.05	Max: 50 Average: 50
Stream Channel Stabilization	Max: 2,000 Average: 1,000	Max: 2 Average: 1	Max:1,500 Average: 750
Streambank Protection (with hard structures)	Max: 300 Average: 300	Max:0.14 Average: 0.14	Max: 300 cubic yards of placed material Average: 300
Streambank Protection (vegetation only)	Max: 2,000 Average: 1,000	Max: 3 Average: 1.5	Max:1,500 Average: 1,500
Tank or Trough	N/A	Max: 0.4 Average: 0.2	Max: 1,000 Average: 500
Underground Outlet (energy dissipator at outlet)	N/A	Max: 10 feet x 15 feet Av.: 10 feet x 15 feet	Max: 20 Average: 20
Water and Sediment Control Basin	N/A	Max: 1 Average: 0.5	Max:1,500 (compacted embankment) Average: 1,500